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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,801	02/19/2002	Alphonse J. Lemanski	215-009977-US (101)	7479

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10/04/2003

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EXAMINER

LEWIS, TISHA D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 10/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,801

Applicant(s)

LEMANSKI, ALPHONSE J.

Examiner

TISHA D. LEWIS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 11 is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 8 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

The following is a response to the amendment received on July 23, 2003, which has been entered.

Priority

The claim for priority under 35 U.S.C. 119(e) and 35 U.S.C. 120 has been acknowledged.

Response to Amendment

Claims 1 and 3-11 are pending in the application in which claim 2 has been cancelled.

-The claim objection to claim 1 has been withdrawn due to the amendment correcting the objectionable subject matter as indicated in the office action mailed on April 23, 2003.

-The 112 2nd rejection to claims 1 and 2 has been withdrawn due to the amendment clarifying the limitations as indicated in the office action mailed on April 23, 2003.

-The 102(b) rejection to claims 1 and 2 has been withdrawn due to the amendment amending claim 1 to recite a limitation (teeth of converter at 90 degrees) not disclosed in the Davidson patent for establishing a 102(b).

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract

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on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract has exceeded 150 words in length and uses an implied phrase in the first line "In one embodiment" which should be deleted. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: in the amendment under "Reference to Related Applications", between "application" and "United", "of" should be removed and inserted between "part" and "application". Appropriate correction is required.

Drawings

Figures 18 and 19 seem to be informal drawings which is good for examination purposes, but upon issue of the application, formal drawings for these figures will need to be submitted.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the 90 degree pitch for the motion converter teeth as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson ('540) in view of Wildhaber ('103). Davidson discloses a continuously variable speed power transmission with an input member (61) rotatable about an input axis, an output member (65) rotatable about an output axis including a plurality of rearwardly directed output face teeth (66),

a conjugate reaction control rotor (70) is mounted for selective rotation about the input axis and includes a plurality of forwardly directed reaction face teeth (69) in opposition to the output face teeth (66),

a motion converter (60) with gear teeth (63 and 68) embodied on both sides and rotatably mounted for nutational motion about the input axis,

a control means selectively adjusts the rate of rotation of the reaction control rotor relative to the input member (by placing the rotor under variable loading against rotation, column 8, lines 9-14), and

relative rotation between the reaction control rotor and the input member results in both rotation and nutation of the converter about the input axis and results in a continuously variable change of ratio of the rotational speed of the output member relative to the input member,

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but Davidson does not disclose the pitch angle of the converter teeth greater than 90 degrees.

Wildhaber discloses a continuously variable speed power transmission with an input member (36) rotatable about an input axis,

an output member (via 20) rotatable about an output axis,

a plurality of bevel teeth (30', 30") mounted to a housing surrounding the input and output member with rearwardly and forwardly directed teeth,

a motion converter (23) with bevel gear teeth (28' and 28") embodied on both sides and rotatably mounted for nutational motion about the input axis wherein the teeth are greater than 90 degrees in pitch (column 1, lines 67 and 68),

a control means selectively adjusts the rate of rotation of a reaction control element (22), and

relative rotation between the reaction control element and the input member results in both rotation and nutation of the converter about the input axis and results in a continuously variable change of ratio of the rotational speed of the output member relative to the input member,

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the converter teeth of Davidson with a pitch greater than 90 degrees in view of Wildhaber to obtain conical pitch surfaces of the teeth to prevent sliding along contact surfaces with the rotor/output teeth.

Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Wildhaber as applied to claims 1 and 7 above, and further in view of

Yamamoto et al ('749). Davidson discloses a continuously variable speed power transmission, but does not disclose the transmission being used in a wheel hub.

Wildhaber discloses a continuously variable speed power transmission, but does not disclose the transmission being used in a wheel hub.

Yamamoto et al discloses a transmission device for disconnecting an input and output in a wheel hub using a motion converter (Figure 41).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the transmission of Davidson and Wildhaber in a vehicle wheel hub in view of Yamamoto et al to convert rotational motion of an input to an reciprocating motion to the output for driving a vehicle wheel.

Allowable Subject Matter

Claims 3 and 11 are allowed. The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose or render obvious a motivation to provide for:

-(As to claim 3) a continuously variable speed power transmission including a pericyclic motion converter engaged with a reaction control rotor wherein the rate of rotation of the rotor is selectively adjusted by a control means and motor/generator components integrated in the reaction control rotor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Claims 4, 6, 8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or render obvious a motivation to provide for:

-(As to claims 4 and 8) a continuously variable speed power transmission including a conjugate motion converter engaged with a reaction control rotor wherein the rate of rotation of the rotor is selectively adjusted by a control means and motor/generator components integrated in the reaction control rotor.

Response to Arguments

Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 305-3597**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

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I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Gassmann ('391), Massie ('154), Nakamura ('126), Brusasco ('566) and Barozzi ('428) are cited as having continuously variable power transmissions wherein a teeth of a motion converter seem to be at least greater than 90 degrees.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 703-305-0921. The examiner can normally be reached on M-Thur 8 AM TO 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

Tdl

September 29, 2003

Tisha D Lewis
Tisha D Lewis
Patent Examiner
AU 3681 9-29-03